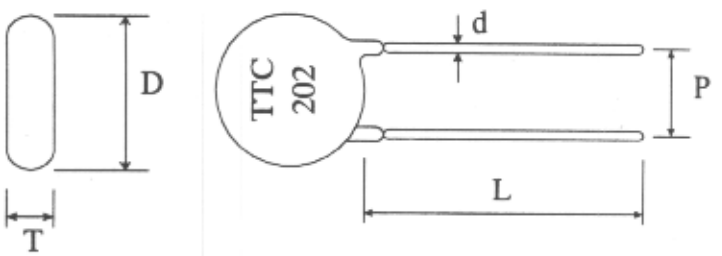
142050

Specification of NTC Thermistor for Temperature Compensation

PART NO . TTC-202

CUSTOMER P/N . _____

1. Dimensions



Disc ϕ	Dmax.	Lmin.	d	p	Tmax.
5	6.5	31	0.5±0.02	3.5±0.5	5

(Unit : mm)

1-1 Material of coating : EPOXY

1-2 Material of Leads : Tinned Copper Wires

1-3 Color of coating : Green

2. Electrial characteristics

	Parameter	Symbol	Test Conditions	Min.	Nor.	Max.	Unit.
a.	Resistance At 25℃	R_{25}	Ta=25℃±0.1℃ I<0.5mA	1.8	2	2.2	KOHM
b.	Resistance At 50℃	R_{50}	Ta=50℃±0.1℃ I<0.5mA	-----	0.708	-----	KOHM
c.	R_{25} / R_{50}	K	----------	-----	2.822	-----	-----
d.	B Constant	B	(8876 Log K)	3720	4000	4280	K
e.	Thermal Dissipation Constant	C	Ta=25℃±0.1℃	-----	9	-----	mW/℃
f.	Thermal Time Constant	-------	Ta=25℃±0.1℃	-----	21	-----	Sec
g.	Insulation Test	-------	1000V DC 1 min	-----	500	-----	Mohm

3.Maximun Ratings

	Parameter	Specification	Unit
a.	Operation Temperature Range	-30 ----- +125	℃
b.	Max' Permissible Current	50	mA
c.	Max' Operating Current	5	mA

4. Mechanical Characteristics

4-1 Leads Terminal Tensile Strength

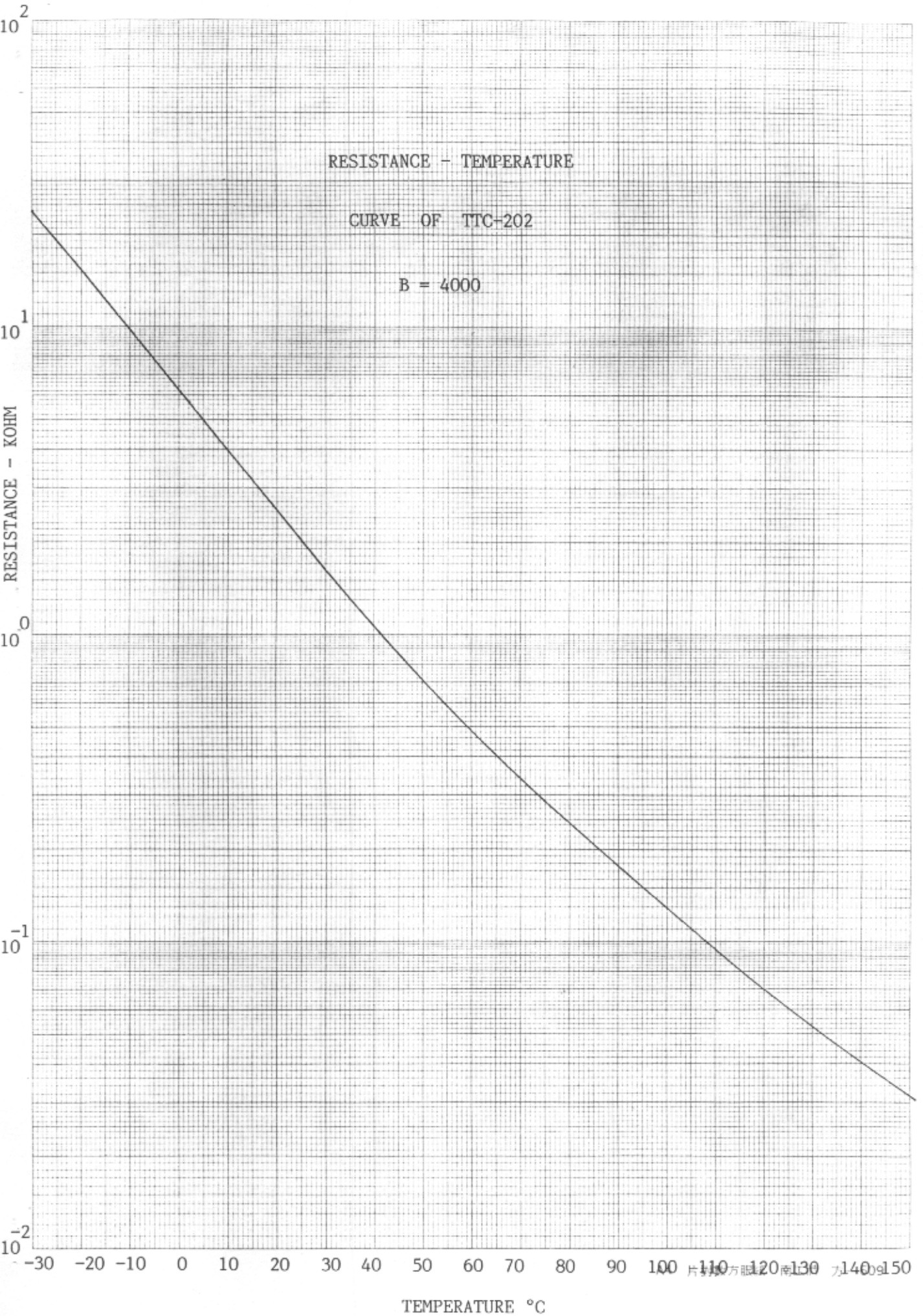
Conditions	Test Result	
Fasten body with a Load Applied to each lead 1 kg for 5 sec.	No break out and damage	OK

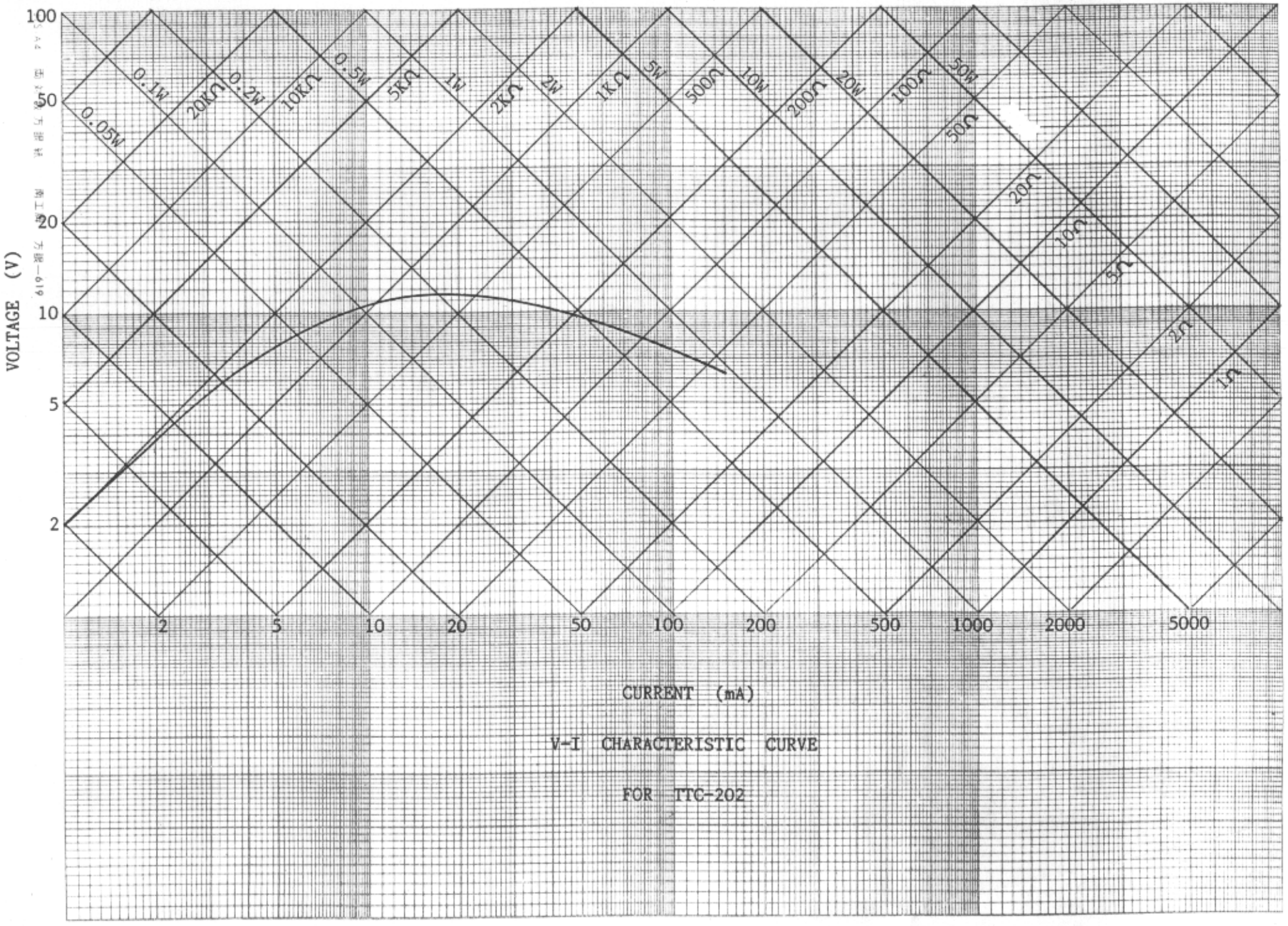
4-2 Leads Terminal Bend Strength

Conditions	Test Result	
Fixed body and hang 0.3 kg on one terminal bend 90° then back , again in opposite .	No break out and damage	OK

5. Reliability Test

Item	Test Conditions	Variable
Temp. cycle test	-40 ℃ X 30 → +25 ℃ X 5 +160 ℃ X 30 → +25 ℃ X 5 } X 10	Within ± 10 %
Humidity test	45 ℃ 95 % RH X 1000 HR	Within ± 10 %
Life test	50 mAmp. X 1000HR	Within ± 10 %
Insulation test	DC 1000 V	ABOVE : 500 MOHM


RESISTANCE - TEMPERATURE
CURVE OF TTC-202
B = 4000
RESISTANCE - KOHM
10^2
10^1
10^0
10^{-1}
10^{-2}
-30 -20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150
TEMPERATURE °C


VOLTAGE (V)
100
50
20
10
5
2
0.05W
0.1W
0.2W
0.5W
1W
2W
5W
10W
20W
50W
20KΩ
10KΩ
5KΩ
2KΩ
1KΩ
500Ω
200Ω
100Ω
50Ω
20Ω
10Ω
5Ω
2Ω
1Ω
2
5
10
20
50
100
200
500
1000
2000
5000
CURRENT (mA)
V-I CHARACTERISTIC CURVE
FOR TTC-202